



St Joseph's RC Voluntary Academy
 Science Long Term Planning September 2024 – July 2025



Cycle A

	Beech Class EYFS	Cedar Class KS1	Elm Class LKS2	Oak Class UKS2
Autumn 1	<p>Managing Self</p> <ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices <p>The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. <p>Creating with materials</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Share their creations, explaining the process they have used; Make use of props and materials when role playing characters in narratives and stories. 	<p>Seasonal Changes and Daily Weather</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • observe changes across the 4 seasons • observe and describe weather associated with the seasons and how day length varies <p>Introducing plants (trees)</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees <p>Animals, including humans</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<p>Rocks</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • describe in simple terms how fossils are formed when things that have lived are trapped within rock • recognise that soils are made from rocks and organic matter <p>Animals, including humans</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • identify that humans and some other animals have skeletons and muscles for support, protection and movement <p>Revisit Rocks</p> <p>Pupils should revisit:</p> <ul style="list-style-type: none"> • compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • describe in simple terms how fossils are formed when things that have lived are trapped within rock • recognise that soils are made from rocks and organic matter 	<p>Properties and Changes of Materials</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets • know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda <p>Animals including humans</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • describe the changes as humans develop to old age • draw a timeline to indicate stages in the growth and development of humans • about the changes experienced in puberty • work scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows
Autumn 2				

<p>Spring 1</p>		<p>Everyday materials Pupils should be taught to:</p> <ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • describe the simple physical properties of a variety of everyday materials • compare and group together a variety of everyday materials on the basis of their simple physical properties 	<p>Forces and Magnets Pupils should be taught to:</p> <ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need contact between 2 objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as having 2 poles • predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	<p>Forces (Gravity and Galileo) Pupils should be taught to:</p> <ul style="list-style-type: none"> • explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between moving surfaces • recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
<p>Spring 2</p>		<p>Revisit Animals, including humans Pupils should revisit:</p> <ul style="list-style-type: none"> • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<p>Plants (Spring 2 and Summer 1) Pupils should be taught to:</p> <ul style="list-style-type: none"> • identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal 	<p>Earth in Space Pupils should be taught to:</p> <ul style="list-style-type: none"> • describe the movement of the Earth and other planets relative to the Sun in the solar system • describe the movement of the moon relative to the Earth • describe the Sun, the Earth and the Moon as approximately spherical bodies • use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky
<p>Summer 1</p>		<p>Revisit Plants, including trees Pupils should revisit:</p> <ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees 		<p>Living Things and Their Habitats Pupils should be taught to:</p> <ul style="list-style-type: none"> • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • describe the life process of reproduction in some plants and animals
<p>Summer 2</p>		<p>Second Revisit Plants and Animals, including humans Pupils should revisit</p>	<p>Light Pupils should be taught to:</p> <ul style="list-style-type: none"> • recognise that they need light in order to see things and that dark is the absence of light 	<p>Forces continued Pupils should be taught to:</p> <ul style="list-style-type: none"> • explain that unsupported objects fall towards the Earth because of the force of

		<ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees Animals, including humans • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<ul style="list-style-type: none"> • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked by an opaque object • find patterns in the way that the size of shadows change 	<p>gravity acting between the Earth and the falling object</p> <ul style="list-style-type: none"> • identify the effects of air resistance, water resistance and friction, that act between moving surfaces • recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
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